

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Presented) An active matrix display device comprising an array of display pixels, each pixel comprising:

a current driven light emitting display element and a first drive transistor for driving a current through the display element, the display element and the first drive transistor being in series between power supply lines;

a first storage capacitor for storing a gate-source voltage of the first drive transistor;

a second drive transistor, operable only during pixel programming, for providing a drive current based on an input voltage provided to the a gate of the second drive transistor, the second drive transistor being driven with a reduced duty cycle for long enough for a desired voltage level be stored on the first storage capacitor; and

a second storage capacitor for storing the input voltage for driving the second drive transistor.

2. (Currently Amended) ~~A~~ The device as claimed in claim 1, wherein the drive current provided by the second drive transistor passes through the first drive transistor, a voltage thereby being generated on the first storage capacitor corresponding to the drive current.

3. (Currently Amended) ~~A~~ The device as claimed in claim 1, wherein each pixel further comprises an address transistor connected between a data input line and an input to the pixel.

4. (Currently Amended) ~~A device as claimed in claim 1, An~~
active matrix display device comprising an array of display pixels,
each pixel comprising:

a current driven light emitting display element and a first
drive transistor for driving a current through the display element,
the display element and the first drive transistor being in series
between power supply lines;

a first storage capacitor for storing a gate-source voltage of the first drive transistor;

a second drive transistor for providing a drive current based on an input voltage provided to a gate of the second drive transistor; and

a second storage capacitor for storing the input voltage for driving the second drive transistor;

wherein each pixel further comprises a shorting transistor connected across the second storage capacitor.

5. (Currently Amended) ~~A device as claimed in claim 1,~~ An active matrix display device comprising an array of display pixels, each pixel comprising:

a current driven light emitting display element and a first drive transistor for driving a current through the display element, the display element and the first drive transistor being in series between power supply lines;

a first storage capacitor for storing a gate-source voltage of the first drive transistor;

a second drive transistor for providing a drive current based

on an input voltage provided to a gate of the second drive transistor; and

a second storage capacitor for storing the input voltage for driving the second drive transistor;

wherein the first drive transistor is connected between a high power supply line and the anode of the display element, and the cathode of the display element is connected to a cathode line which is shared between a row of pixels.

6. (Currently Amended) ~~A~~ The device as claimed in claim 5, wherein a charging transistor is connected between the high power supply line and the gate of the first drive transistor.

7. (Currently Amended) ~~A device as claimed in claim 1, An~~ active matrix display device comprising an array of display pixels, each pixel comprising:

a current driven light emitting display element and a first drive transistor for driving a current through the display element, the display element and the first drive transistor being in series between power supply lines;

a first storage capacitor for storing a gate-source voltage of the first drive transistor;

a second drive transistor for providing a drive current based on an input voltage provided to a gate of the second drive transistor; and

a second storage capacitor for storing the input voltage for driving the second drive transistor;

wherein the anode of the display element is connected to a high power supply line which is shared between a row of pixels, the cathode of the display element is connected to the drain of the first drive transistor, and the source of the first drive transistor is connected to ground.

8. (Currently Amended) A The device as claimed in claim 7, wherein the second drive transistor is connected in series with a coupling transistor between a power supply line and the drain of the first drive transistor.

9. (Currently Amended) A The device as claimed in claim 8, wherein a charging transistor is connected between ground and the

gate of the first drive transistor.

10. (Currently Amended) An active matrix display device comprising an array of display pixels, each pixel comprising:

a current driven light emitting display element and a first drive transistor for driving a current through the display element, the display element and the first drive transistor being in series between power supply lines;

a first storage capacitor for storing a gate-source voltage of the first drive transistor;

a second drive transistor for providing a drive current based on an input voltage provided to ~~the~~ a gate of the second drive transistor;

a second storage capacitor for storing the input voltage for driving the second drive transistor; and

a voltage compensation circuitry for providing threshold compensation of the second drive transistor, the compensation circuitry including a third storage capacitor for storing the threshold voltage of the second drive transistor, and

transistors to provide a charging path to enable the third

storage capacitor to be charged to a voltage above the threshold voltage of the second drive transistor.

11. (Currently Amended) A The device as claimed in claim 10, ~~wherein the compensation circuitry comprises a third storage capacitor for storing the threshold voltage of the second drive transistor,~~ wherein the second and third storage capacitors are in series, and wherein the input to the pixel is provided to the junction between the second and third storage capacitors.

Claim 12 (Canceled)

13. (Currently Amended) A The device as claimed in claim 1, wherein the current driven light emitting display element comprises an electroluminescent display element.

14. (Currently Amended) A method of addressing an active matrix display device comprising an array of display pixels, in which each pixel comprises a current driven light emitting display element and a first drive transistor for driving a current through

the display element, the method comprising, for each pixel:

using an input voltage to drive a second drive transistor,
thereby generating a source drain current;

passing the source drain current through the first drive
transistor;

storing the gate-source voltage of the first drive transistor
resulting from passing the source drain current through the first
drive transistor on a first storage capacitor;

driving the display element using the first drive transistor
based on the stored gate-source voltage; and

switching off the second drive transistor; wherein using an
input voltage to drive the second drive transistor comprises adding
the input voltage to the threshold voltage of the second drive
transistor and applying the result to the gate-source of the second
drive transistor.

Claim 15 (Canceled)

16. (New) The display device of claim 1, wherein the second
storage capacitor is connected between the gate and a drain of the

second drive transistor.

17.(New) A display device comprising an array of display pixels, each pixel comprising:

a first drive transistor for driving a current through a display element;

a second drive transistor driven by input voltage to generate a source drain current, the source drain current being passed through the first drive transistor, wherein the input voltage is added to a threshold voltage of the second drive transistor to form a combined voltage which is applied to the gate-source of the second drive transistor;

a first storage capacitor that stores the gate-source voltage of the first drive transistor resulting from passing the source drain current through the first drive transistor;

wherein the display element is driven using the first drive transistor based on the stored gate-source voltage of the first drive transistor, and the second drive transistor is driven with a reduced duty cycle for long enough for a desired voltage level be stored on the first storage capacitor.